"PSYCHO-BEHAVIORAL DETERMINANTS AFFECTING QUALITY OF LIFE OF STAFF NURSES POSTED IN CRITICAL VS. NON-CRITICAL UNITS"

SYNOPSIS SUBMITTED

by

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BACKGROUND

Stress has been categorized as a precursor or stimulus, as a consequence or response, and as an interaction. It has been studied from many different frameworks. It was proposed a physiological assessment that supports considering the association between stress and illness (Selye, 1980).

Conversely, a psychological view in which stress is "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being"(Lazarus, Folkman, & Stress, 1984)

Work stress in nursing was first assessed in 1960 when Menzies identified four sources of anxiety among nurses: patient care, decision making, taking responsibility, and change. The nurse's role has long been regarded as stress-filled based upon the physical labor, human suffering, work hours, staffing, and interpersonal relationships that are central to the work nurses do. Since the mid-1980s, however, nurses' work stress may be escalating due to the increasing use of technology, continuing rises in health care costs, and turbulence within the work environment (Jennings, 2008).

The effects of such stress on nurses' health and well-being which appears to be general agreement that the experience of work-related stress generally detracts from the quality of nurses' working lives, increases minor psychiatric morbidity, and may contribute to some forms of physical illness. Anxiety about the more tangible hazards of nursing, and exposure to the psycho-social hazards associated with that work can give rise to the experience of stress. In turn, that experience can detrimentally influence job satisfaction, psychological well-being and physical health (Cox, Griffiths, & Cox, 1996).

In China, nursing administrative strategies are different from those in Western countries. Public hospitals all nursing staffs are permanent full-time and have to work

40 hours a week; there are no casual or on-call nurses for sick leave and holiday relief. Most hospitals still use a non-family friendly system with nurses rotating through a set roster. This type of rostering system offers limited choice for nurses to work around family life. Nursing is considered a lower-paid profession compared with other industries. As a result, nursing turnover and absenteeism can be high (Lin, St John, & Mcveigh, 2009).

Nurses are trained to deal with factors such as an enclosed atmosphere, time pressures, excessive noise or undue quiet, no alternate possibility, unlikeable sights and sounds, and lengthy standing hours. Chronic stress takes a charge when there are additional stress factors like home stress, conflict at work, inadequate staffing, poor teamwork, inadequate training, and poor supervision. Stress is known to cause emotional exhaustion in nurses and lead to negative feelings toward those in their care. It is important to identify the extent and sources of stress in a healthcare organization to find stress management strategies to help the individual and the environment. Stress in nurses affects their health and increases absenteeism, attrition rate, injury claims, infection rates, and errors in treating patients (Kane, 2009).

Stress is thought to be a major contributor to suicide. A stressful life event, such as the death of a spouse or loss of employment, may trigger the suicide (Mościcki, 1997). Registered nurses with severe level of stress at home or at work had association with an increased risk of suicide. Life events, such as marriage, divorce, death of a close relative, or change in job act as triggers in already vulnerable nurses (Feskanich et al., 2002).

Occupational stress and psychological well-being were negatively related to each other, whereas the greater the negative affectivity (fear, nervousness, range, guilt, contempt, disgust, sadness, loneliness, self-dissatisfaction and psychological distress) the lower the psychological well-being. Negative affectivity can be said to influence

the perception of occupational stress and psychological well-being in such a way that individuals with high stress and high negative affectivity demonstrate low psychological well-being (Salami, 2010).

OBJECTIVES OF THE STUDY

The variables of the research will be studied with reference to staff nurses working in the Himalayan Institute of Medical Sciences, Dehradun with the following objectives:

1. To find out baseline differences in Psycho behavioral determinants of Staff Nurses posted in critical and non-critical units.
2. To find out baseline differences in Quality of life of Staff Nurses posted in critical and non-critical units.
3. To find the effect of change in posting on Psycho-behavioral determinants among Staff Nurses posted in critical units.
4. To find the effect of change in posting on Quality of Life among Staff Nurses posted in critical units.
5. To find the effect of change in posting on Psycho-behavioral determinants among Staff Nurses posted in non-critical units.
6. To find the effect of change in posting on Quality of Life among Staff Nurses posted in non-critical units.

HYPOTHESES

The hypotheses have been grouped in accordance to the objectives of the study.

1. H_0 Staff nurses posted in critical units will not differ in their mean scores of sub scales of MBI-HSS than those posted in non-critical units.
2. H_0 Staff nurses posted in critical units will not have difference in value of heart rate (HR), galvanic skin response (GSR) and skin temperature than those posted in non-critical units.
3. H_0 Staff nurses posted in critical units will not differ in mean scores of domain wise quality of life than those posted in non-critical units.
4. H_0 Staff nurses posted in critical units will not differ in mean scores of overall quality of life and overall health than those posted in non-critical units.
5. H_0 Staff nurses posted in critical units when shifted to non- critical units will not differ in mean scores of MBI-HSS sub scales of burnout.
6. H_0 Staff nurses posted in critical units when shifted to non- critical units will not differ in mean scare of heart rate, galvanic skin response (GSR) and skin temperature.
7. H_0 Staff nurses posted in critical units when shifted to non-critical units will not differ in mean scores of quality of life-physical, psychological, social and environmental domain.
8. H_0 Staff nurses posted in critical units when shifted to non-critical units will not differ in mean scores of overall quality of life and overall health.
9. H_0 Staff nurses posted in non- critical units when shifted to critical units will not differ mean scores of MBI-HSS sub scales of burnout

10. H_0 Staff nurses posted in non- critical units when shifted to critical units will not differ in mean scores of heart rate, galvanic skin response (GSR) and skin temperature.
11. H_0 Staff nurses posted in non-critical units when shifted to critical units will not differ in mean score of quality of life - physical, psychological, social and environmental domain.
12. H_0 Staff nurses posted in non- critical units when shifted to critical units will not differ in mean score of overall quality of life and overall health.

MATERIAL AND METHODS

Research Approach

In this study, quantitative research approach was used as the researcher's aim to study the impact of different work setting on psycho-behavioral determinants and quality of life of staff nurses and the effectiveness of a change in posting from critical to non-critical units and vice versa to reduce psycho-behavioral determinants and improve quality of life of staff nurses.

Research design

Experimental research design was used for the present study.

Variables of the Study

1. Independent Variable: Critical and non-critical units
2. Dependent Variable:
    2.1 Psycho-behavioral determinants-
        a) Burnout level of staff nurse

b) General adaptation syndrome- a physiological response to stress among staff nurses: heart rate, galvanic skin response (GSR), and skin temperature.

2.2 Quality of life of staff nurse

Setting of the study

The study will be conducted at Himalayan Hospital, Dehradun. It is a tertiary care level, 750 bedded teaching Hospital of Uttarakhand state. Furthermore, critical and critical units will be selected based on patient's acuity category and tool (Harper & McCully, 2007; Kidd et al., 2014).

Current acuity tool: It has four rating options ranging from 1 to 4. Here, one represents the lowest level of acuity and four represent the highest level of acuity. Evaluation of rating are depends on time duration to complete the nursing intervention, how much physical energy required, intensity of emotional care and support, skills required, repetition of the task and how frequent re-assessment is required for the specific nursing activity.

Population

In this study, the population was the Staff Nurse. The target population was drawn from critical and non-critical units based on inclusion and exclusion criteria, at Himalayan Hospital, Dehradun.

Sample and sampling

Sample size calculation was done on the basis of findings from a previous study considering subscales of Maslach Burnout Inventory (MBI-HSS) - Emotional exhaustion (EE) as a main parameter (Ozden, Karagözoğlu, & Yıldırım, 2013). A difference between the groups of more than 20-30% will be considered as a practical

significant. Using α=0.05 (Two Tailed) and β=80%, researchers found the minimum required sample size to be 48 staff nurses in each group.

The sample size is calculated and found to be 84 staff nurses, 48 each from Critical and Non-critical units. To avoid short of sample size from 96 due to dropout of participant during the study, researcher increase sample size up to 108.

The data about nurses working in the Himalayan Hospital was collected from the university administration. Staff nurses were selected by simple random technique (lottery method). Every month 9 nurses from critical units and 9 nurses from non-critical units will be selected randomly.

Inclusion criteria:

1. Minimum 1 year of work experience as a staff Nurse.
2. Staff nurse working in shift duty.

Exclusion criteria:

1. Pregnancy: at the time of interview, female nurses will asked about pregnancy status. Also, nurses will be communicated that, during the data collection period if become pregnant, they should inform to the researcher.
2. Presence of any chronic illness which makes difficult in daily routine work in the patient care unit/ward.
3. Staff nurse who has submitted resignation notice.
4. Any administrative issue that does not allow the staff nurses to shift in other unit for the period of 2 months (e.g. short staffing, change in the role of staff such as from shift duty to general duty).
5. If any staff nurse, after inclusion, remains away for more than 7 days from work place due to long leave/absent/resigns/leaves institute during the study period will be dropped from the study.

6. Unwilling to join in the study.

Data collection tools:

The data will be collected with the help of following tool and instruments:

A. Demographic proforma

B. MBI-HSS

C. WHOQOL-BREF

D. Computerised Stress profile test (CSPT)

Content validity and Reliability

The questionnaire used were already internationally acceptable and validated by respective organizations.

Ethical consideration

The study was conducted after getting approval from the University Research Committee. Written permission was taken from the Medical Superintendent and Director Nursing of the hospital. A written consent was obtained from all the respondents who participated in the study. Confidentiality of the data were ensured throughout the study.

Data collection procedure

A pilot study was conducted in the Urban Health Centre of Himalayan Hospital, Rishikesh. Data were collected according to the research design. On every fourth week of month nine nurses from critical units and nine from non-critical units were selected by statistician with simple random technique and made a pair (1st nurse from CU and NCU will be a pair). Selected staff nurses were contacted by the researcher and scheduled to meet all together in next 2 to 3 days in the classroom of holistic department at 10 am, so that their duty schedule should not get disturbs. Nurses were instructed not to drink any kind of beverages (e.g., coffee, tea, cold drink, etc.), smoke, chew tobacco

and not to eat anything after 9 am, so the physiological parameters should not alter due to effects of drinks, foods and other substance.

After arrival to the classroom, researchers interacted with nurses in casual talk, so they can be comfortable and diverted their thought process related to family and workplace. All the participants were explained the nature and purpose of the study and those who provided the consent were requested to sign a written consent form.

At 10.15am they were given an informed consent form, demographic proforma, MBI-HSS and WHOQOL-BREF to fill and followed by briefing about Computerised stress profile test. All the staff Nurses given a schedule for computerised stress profile test (CSPT). The Computerised stress profile test (CSPT) procedure was conducted by a trained technician.

After completion of computerised stress profile test, staff nurse were given the name of the unit in which his/her posting was shifted. All the participants were informed that every 15th day they will be contacted to fill the MBI-HSS and WHOQOL-BREF questionnaire and on the 4th week of second month the computerised stress profile test to be repeated. After 2nd Computerised stress profile test, nurses were informed about re-shifting of their posting to the original unit and continuity in the filling of the MBI-HSS and WHOQOL-BREF questionnaire on the 15th day and 30th day. The data collection process was terminated after thanking each respondent for their participation and co-operation.

Every month selected staff nurses' names were informed to the office of nursing supervisor and nursing superintendent as well as to the unit in-charge nurse. All the incharge nurses of critical and non-critical units were briefed about study protocol and instructed to give morning, evening, morning and night shift duty respectively to the staff nurses who were posted to their unit under research project. As a protocol,

participants were explained about policy and procedures of the unit by the incharge nurse. Internal training and briefing about handling of bio-medical equipment was done by incharge nurse of respective units.

As a part of critical unit's policy, new staff nurse was not given an independent patient assignment during the first 10 to 15 days of posting in critical units. The meaning of independent patient assignment is "a patient is assigned to a new staff nurse with the old staff nurse of the critical unit where a new staff nurse will provide nursing care under the supervision of old staff nurse (who is working in the same unit since last minimum two years)." Patient assignment to the staff nurses were done by incharge nurse or by a shift incharge nurse.

Data analysis

The data collected from participants was coded and entered into Microsoft excel spreadsheet. The data were analysed and interpreted by using descriptive as well as inferential statistics. Qualitative data was analysed and interpreted with the help of narrations, descriptive indexing. Illustrative presentation of data done with the help of tables and graphs. The data was analysed by using the SPSS-21 schedule. However, exact tests that were used in analysing the data are mentioned in respective chapters in the respective sections.

MAJOR FINDINGS

- At baseline critical unit staff nurses (CUSN) demonstrated a higher mean scores of emotional exhaustion, depersonalization and lower mean score of personal accomplishment, quality of life in all the domains as compared to the mean scores of non-critical unit staff nurses (NCUSN).
- At baseline CUSNs had significantly higher mean scores in EE, DP and lower mean score in PA subscales of MBI-HSS than the staff nurses posted in NCUs. But majority of staff nurses were in moderate level of burnout in EE and DP subscales of MBI-HSS. While in Personal Accomplishment (PA) subscale, large number of staff nurses were in high level from CU than NCU. This indicated that the nurses posted in CU had more burnout than in NCU.
- Change in the posting of staff nurses from critical units to non-critical units had significantly reduced the burnout scores in all the subscale of MBI-HSS at 60^{th} day ($p<0.05$).
- There was a significant reduction in mean score of heart rate and GSR value and raise in mean score of skin temperature of staff nurse at 60^{th} day of change in from critical to critical unit.
- The mean scores of all the domains (physical, psychological, social and environmental) of QOL of staff nurses were significantly increased after shifting to non-critical unit at 60th day. Similar changes were observed in the mean scores of overall quality of life, whereas there was no significant difference in the overall health status.

SIGNIFICANCE / IMPLICATION

The implications made in the study are vital concern to the nursing practice, nursing education, nursing administrator and nursing research.

Nursing practice: Several implications can be drawn from the present study for nursing practice. Continue education programmes based on prevention and management on workplace related stress, techniques to manage their work life.

The findings of the study showed that the imparting educational programme regarding soft skills development, communication, interpersonal relationship, organisation of work environment, time management and development of coping mechanism.

Nursing Education: Education is a key component to update and improve the knowledge of an individual, make a healthy personality with a positive attitude. Education in nursing has a vital role to play. Since; today's nursing students are tomorrow's staff nurses, educators, administrators and supervisor. The nurse educators have the additional responsibility not only in imparting of knowledge and skills, but also making them psychologically strong to work in different settings of hospital areas and face the challenges of professional as well as personal life. During student life teaching of yoga, developing a habit of exercises and certain sports activities that will help to maintain healthy Neuro-endocrine system of the body.

Nursing administration: Nursing administration has a big role to keep the nurses free from stress at certain levels. A periodically survey of nurses regarding their work related issues and also resolving in a given due time frame.

A job rotation policy can be framed for all the staff nurses, in which everyone will work in a different unit for a period of 2 months. This will improve knowledge and skill, social relationship and a break from working in the same environment.

This strategy can help in manpower management, staff nurse those who got experience of working in a different units can be posted in that unit to manage sudden manpower crisis. It will also improve the coping strength of non-critical unit staff nurses, when they will get posting in critical units.

Nursing research: This topic has great relevance to the present day complexities of the healthcare system. The Psycho-behavioral is a dynamic subject, it changes person to person, and each situation of life event can change psychological health of nurses. So ongoing research with different strategies for keeping a healthy level of psycho-behavioral aspect and better quality of life of nurses can be conducted which will help in achieving institutional goal.

REFERENCES:

Aranđelović, M., & Ilić, I. (2006). Stress in workplace-possible prevention. *Facta Universitatis*, *13*(3), 139–144.

Baxter, M. L. (2012). *" Being certain": Moral distress in critical care nurses*. Virginia Commonwealth University.

Cox, T., Griffiths, A., & Cox, S. (1996). *Work-related stress in nursing: Controlling the risk to health*. International Labour Office Geneva.

Evans, C., Razia, R., & Cook, E. (2013). Building nurse education capacity in India: insights from a faculty development programme in Andhra Pradesh. *BMC Nursing*, *12*(1), 8.

Feskanich, D., Hastrup, J. L., Marshall, J. R., Colditz, G. A., Stampfer, M. J., Willett, W. C., & Kawachi, I. (2002). Stress and suicide in the Nurses' Health Study. *Journal of Epidemiology & Community Health*, *56*(2), 95–98.

Jennings, B. M. (2008). Work stress and burnout among nurses: Role of the work environment and working conditions.

Kane, P. P. (2009). Stress causing psychosomatic illness among nurses. *Indian Journal of Occupational and Environmental Medicine*, *13*(1), 28.

Lazarus, R. S., Folkman, S., & Stress, A. (1984). Coping. *Stress and Emotion: A New Synthesis*, *5*, 101–126.

Lin, F., St John, W., & Mcveigh, C. (2009). Burnout among hospital nurses in China. *Journal of Nursing Management*, *17*(3), 294–301.

Mojoyinola, J. K. (2008). Effects of job stress on health, personal and work behaviour of nurses in public hospitals in Ibadan Metropolis, Nigeria. *Ethno-Med*, *2*(2), 143–148.

Mościcki, E. K. (1997). Identification of suicide risk factors using epidemiologic studies. *Psychiatric Clinics of North America*, *20*(3), 499–517.

Raja Lexshimi, R., Tahir, S., Santhna, L. P., & Md Nizam, J. (2007). Prevalence of stress and coping mechanism among staff nurses in the intensive care unit. *Med Health*, *2*(2), 146–153.

Salami, S. O. (2010). Occupational stress and well-being: emotional intelligence, self-efficacy, coping, negative affectivity and social support as moderators. *Journal of International Social Research*, *3*(12).

Selye, H. (1980). A personal message from Hans Selye. *Journal of Extension, May/June*, 1–11.

Shibu John, Shahnawaz Abdin, Akther Ali, V. S. (n.d.). Work – Leisure Conflict among ICU Nursing Staff. In *International Conference on Technology and Business Management* (pp. 18–20).

Tzeng, D.-S., Chung, W.-C., Lin, C.-H., & Yang, C.-Y. (2012). Effort-reward imbalance and quality of life of healthcare workers in military hospitals: a cross-sectional study. *BMC Health Services Research*, *12*(1), 309.